

What Is Claimed Is:

1 1. A method of generating an image using raster image processing, said image being
2 generated based on a specification specifying said image, said specification containing data
3 representing a plurality of objects, said method comprising:

4 implementing a plurality of approaches, with each approach being designed to generate
5 said image;

6 receiving said specification;

7 examining said specification to determine a number of resources required to generate
8 each of said plurality of approaches;

9 selecting one of said plurality of approaches which requires an optimal number of
10 resources;

11 generating said image from said specification using said selected one of said plurality of
12 approaches.

1 2. The method of claim 1, wherein said plurality of approaches differ at least in one of
2 rendering and screening, wherein said rendering and screening are contained in said raster image
3 processing.

1 3. The method of claim 2, wherein said plurality of approaches comprises two
2 approaches.

1 4. The method of claim 3, wherein said screening is performed using a back-end
2 screening in a first one of said plurality of approaches and using pipelined screening in a second
3 one of said plurality of approaches, wherein said rendering is implemented consistent with said
4 back-end screening in said first approach and with said pipelined screening in said second
5 approach.

1 5. The method of claim 4, wherein said examining comprises determining a minimum
2 duration of time consumed by either said back-end screening or said pipelined screening.

1 6. The method of claim 5, wherein a system implementing said method contains a
2 random access memory (RAM) and a cache, wherein said cache enables faster access to data to
3 a processing unit, said determining a minimum duration further comprises determining an
4 additional time required by said back-end screening approach due to storing rendered data in said
5 RAM.

1 7. The method of claim 5, wherein said determining a minimum duration further
2 comprises determining an additional time required by said pipelined screening due to the overlap
3 of objects contained in said specification for said image.

1 8. The method of claim 5, wherein a system implementing said method contains a
2 random access memory (RAM) and a cache, wherein said cache enables faster access to data to
3 a processing unit, wherein said determining a minimum duration further comprises determining
4 an additional time required by said pipelined screening when said processing unit accesses a
5 code in cache enabling implementation of said pipelined screening, and an instruction cache miss
6 results in accessing said code in said cache.

1 9. The method of claim 5, wherein a system implementing said method contains a
2 random access memory (RAM) and a cache, wherein said cache enables faster access to data to
3 a processing unit, said determining a minimum duration further comprises determining an
4 additional time required by said pipelined screening if a data structure for a desired tile size does
5 not fit in said cache, wherein said data structure is used in said pipelined screening.

1 10. The method of claim 1, wherein said specification is provided in a page description
2 language (PDL).

1 11. A system for generating an image using raster image processing, said image being
2 generated based on a specification specifying said image, said specification containing data
3 representing a plurality of objects, said system comprising:
4 means for implementing a plurality of approaches, with each approach being designed
5 to generate said image;
6 means for receiving said specification;
7 means for examining said specification to determine a number of resources required to
8 generate each of said plurality of approaches;
9 means for selecting one of said plurality of approaches which requires an optimal number
10 of resources;
11 means for generating said image from said specification using said selected one of said
12 plurality of approaches.

1 12. The system of claim 11, wherein said plurality of approaches differ at least in one of
2 rendering and screening, wherein said means for rendering and means for screening are
3 contained in said raster image processing.

1 13. The system of claim 12, wherein said plurality of approaches comprises two
2 approaches.

1 14. The system of claim 13, wherein said means for screening is implemented using a
2 back-end screening in a first one of said plurality of approaches and using pipelined screening
3 in a second one of said plurality of approaches, wherein said means for rendering is implemented
4 consistent with said back-end screening in said first approach and with said pipelined screening
5 in said second approach.

1 15. The system of claim 14, wherein said means for examining comprises means for
2 determining a minimum duration of time consumed by either said back-end screening or said
3 pipelined screening.

1 16. The invention of claim 11, wherein said system comprises a computer system.

1 17. A computer program product for use with a computer system, said computer program
2 product comprising a computer usable medium having computer readable program code means
3 embodied in said medium generating an image using raster image processing, said image being
4 generated based on a specification specifying said image, said specification containing data
5 representing a plurality of objects, said computer program product including:

6 computer readable program code means for implementing a plurality of approaches, with
7 each approach being designed to generate said image;

8 computer readable program code means for receiving said specification;

9 computer readable program code means for examining said specification to determine a
10 number of resources required to generate each of said plurality of approaches;

11 computer readable program code means for selecting one of said plurality of approaches
12 which requires an optimal number of resources;

13 computer readable program code means for generating said image from said specification
14 using said selected one of said plurality of approaches.

1 18. The computer program product of claim 17, wherein said plurality of approaches
2 differ at least in one of rendering and screening, wherein said computer readable program code
3 means for rendering and computer readable program code means for screening are contained in
4 said raster image processing.

1 19. The computer program product of claim 18, wherein said plurality of approaches
2 comprises two approaches.

1 20. The computer program product of claim 19, wherein said computer readable program
2 code means for screening is implemented using a back-end screening in a first one of said
3 plurality of approaches and using pipelined screening in a second one of said plurality of

4 approaches, wherein said computer readable program code means for rendering is implemented
5 consistent with said back-end screening in said first approach and with said pipelined screening
6 in said second approach.

1 21. The computer program product of claim 20, wherein said computer readable program
2 code means for examining comprises computer readable program code means for determining
3 a minimum duration of time consumed by either said back-end screening or said pipelined
4 screening.